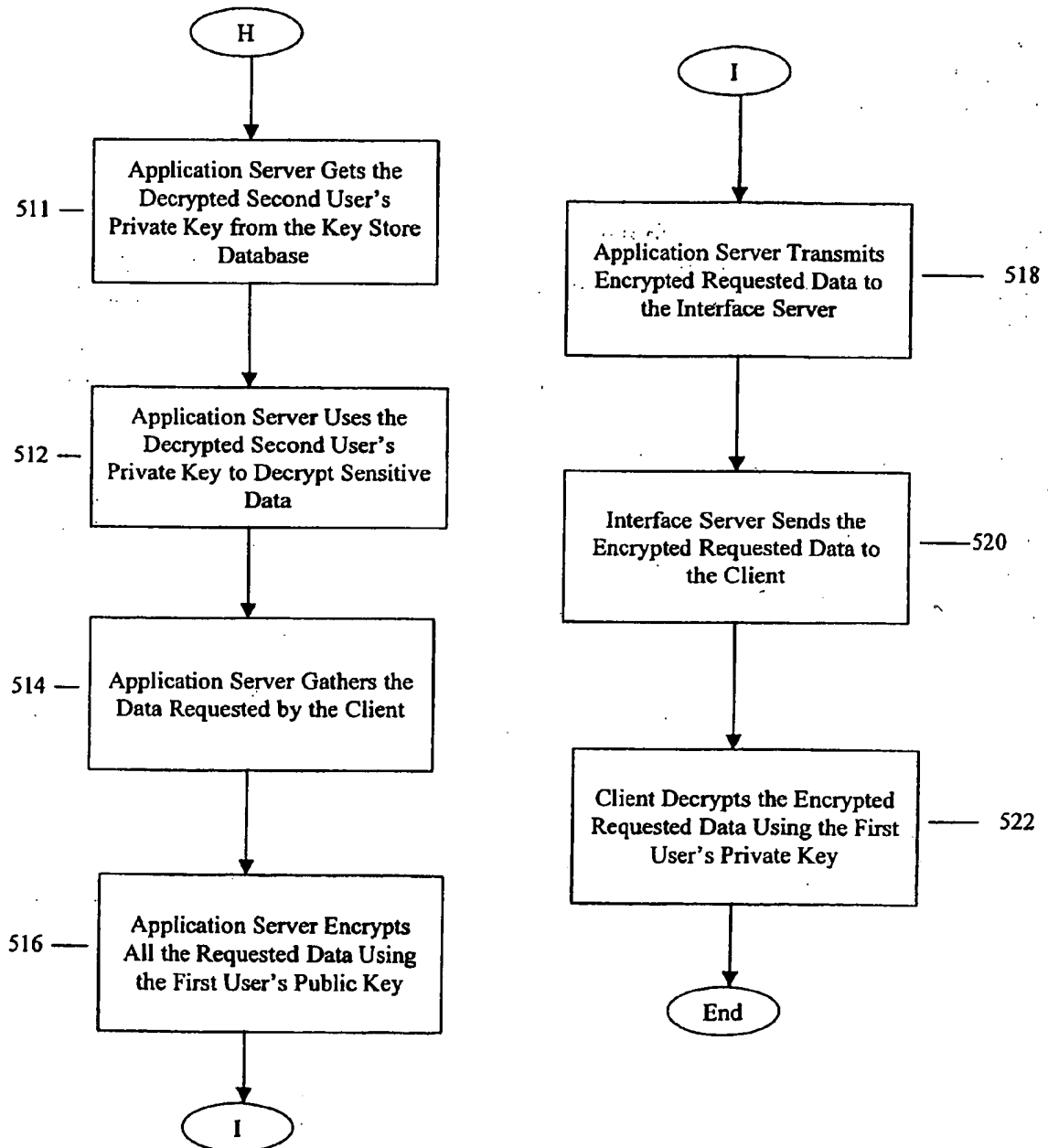
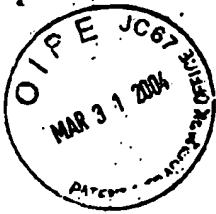




FIG. 5 (continued)

Accessing Sensitive Data (Cont.)





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Fig. 1a

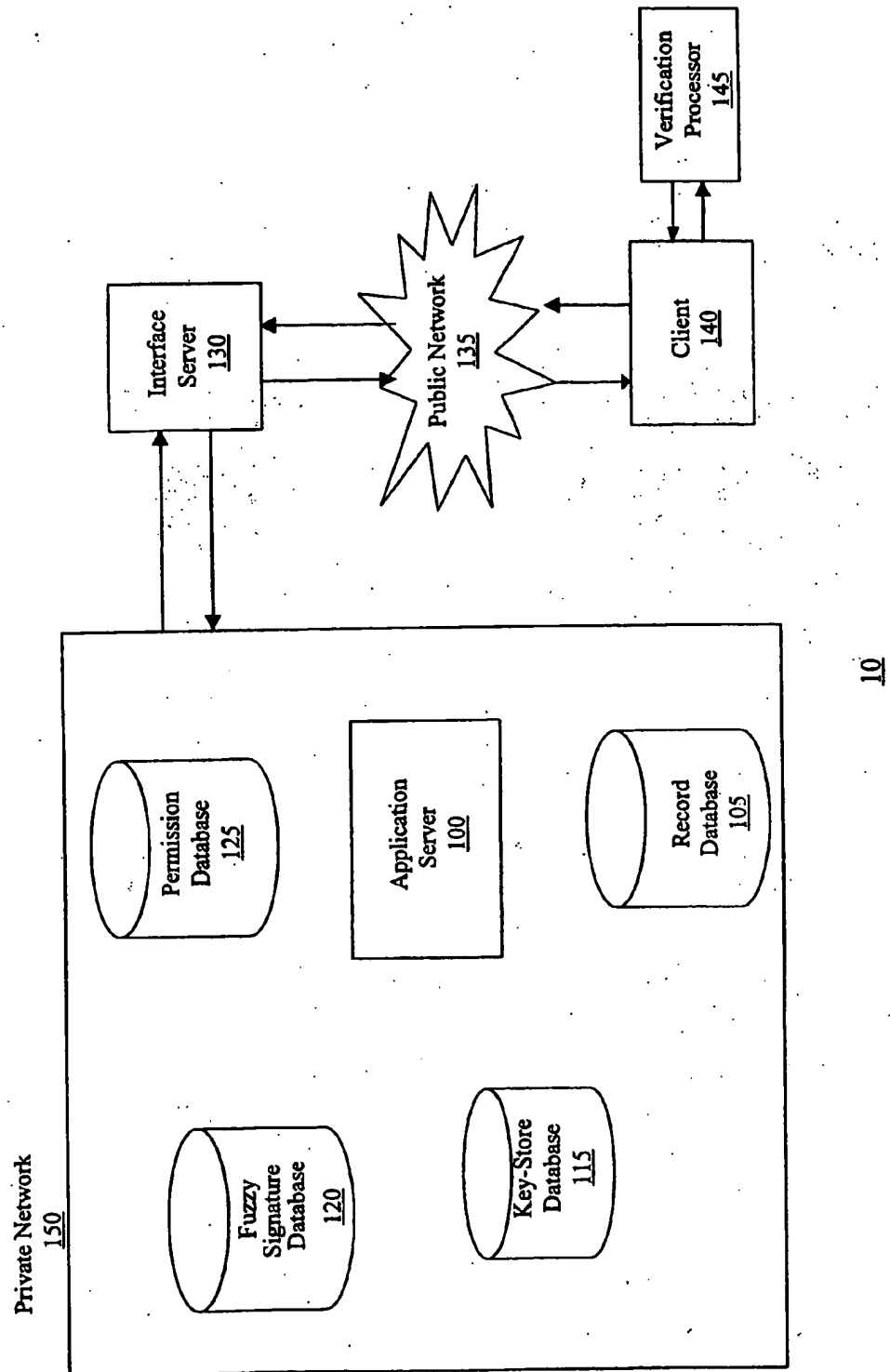
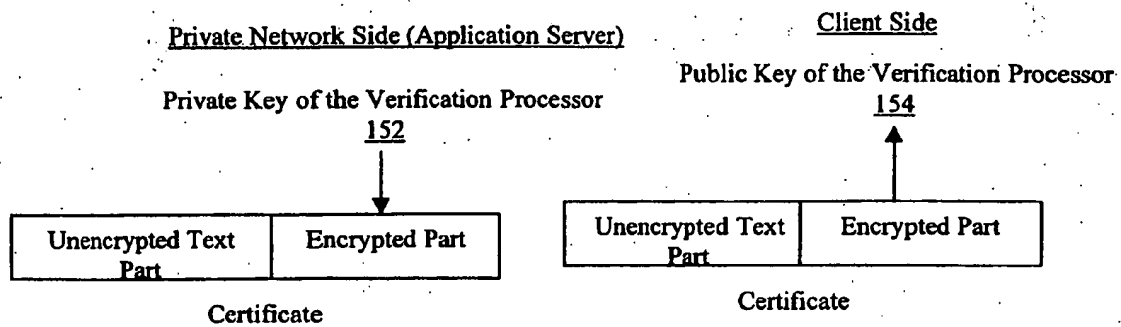




Fig. 1b

Keys Used for Authenticating the
Interface Server



Key: ↓ = Encryption ↑ = Decryption

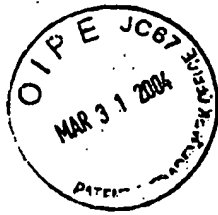
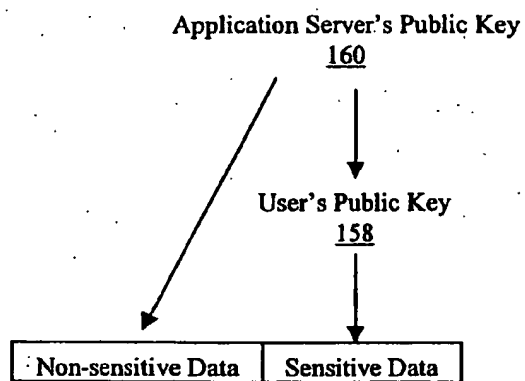


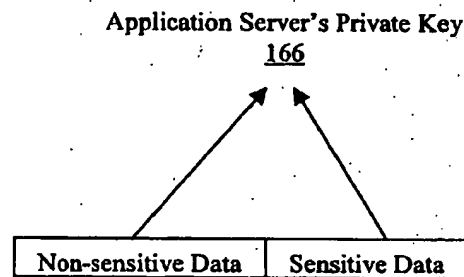
Fig. 1c

Keys Used in Transmitting, Receiving,
and Storing Data

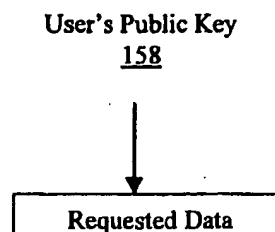
Client Transmitting Data
to a Private Network (Application Server)



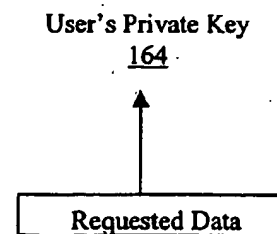
Private Network (Application Server)
Receiving and Storing Data



Private Network (Application Server)
Transmitting Data to Client



Client Receiving Data

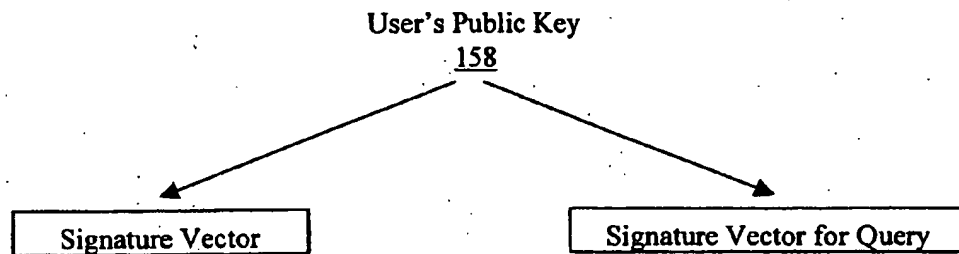


Key: ↓ = Encryption ↑ = Decryption



Fig. 1d

Keys Utilized in Fuzzy Searching

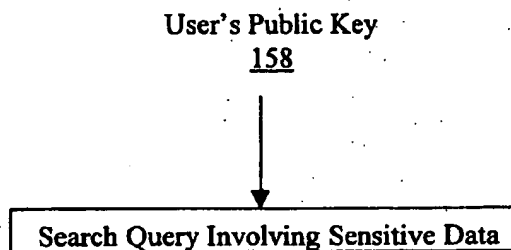


Key: ↓ = Encryption ↑ = Decryption



Fig. 1e

Keys Utilized in Relational Database Searching



Key: ↓ = Encryption ↑ = Decryption



Fig. 1f

Keys Utilized in Accessing Sensitive Data

First User's Key-Store Master Key

168

Second User's Private Key
in Key-Store Database

Second User's Private Key

164

Sensitive Data

Key: ↓ = Encryption ↑ = Decryption



Fig. 1h

Steps for Communications between a Client and a Private Network

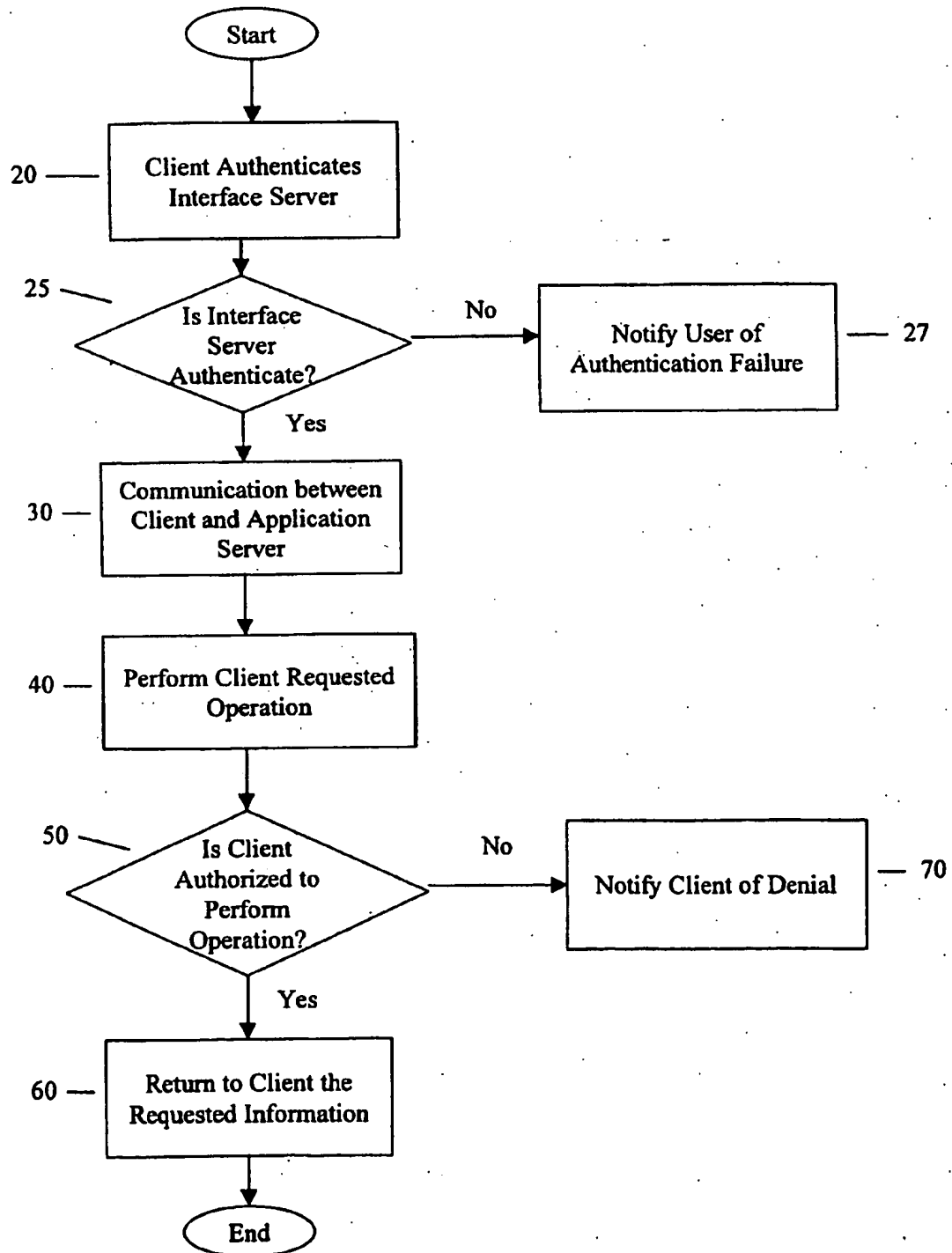




Fig. 2

Authentication

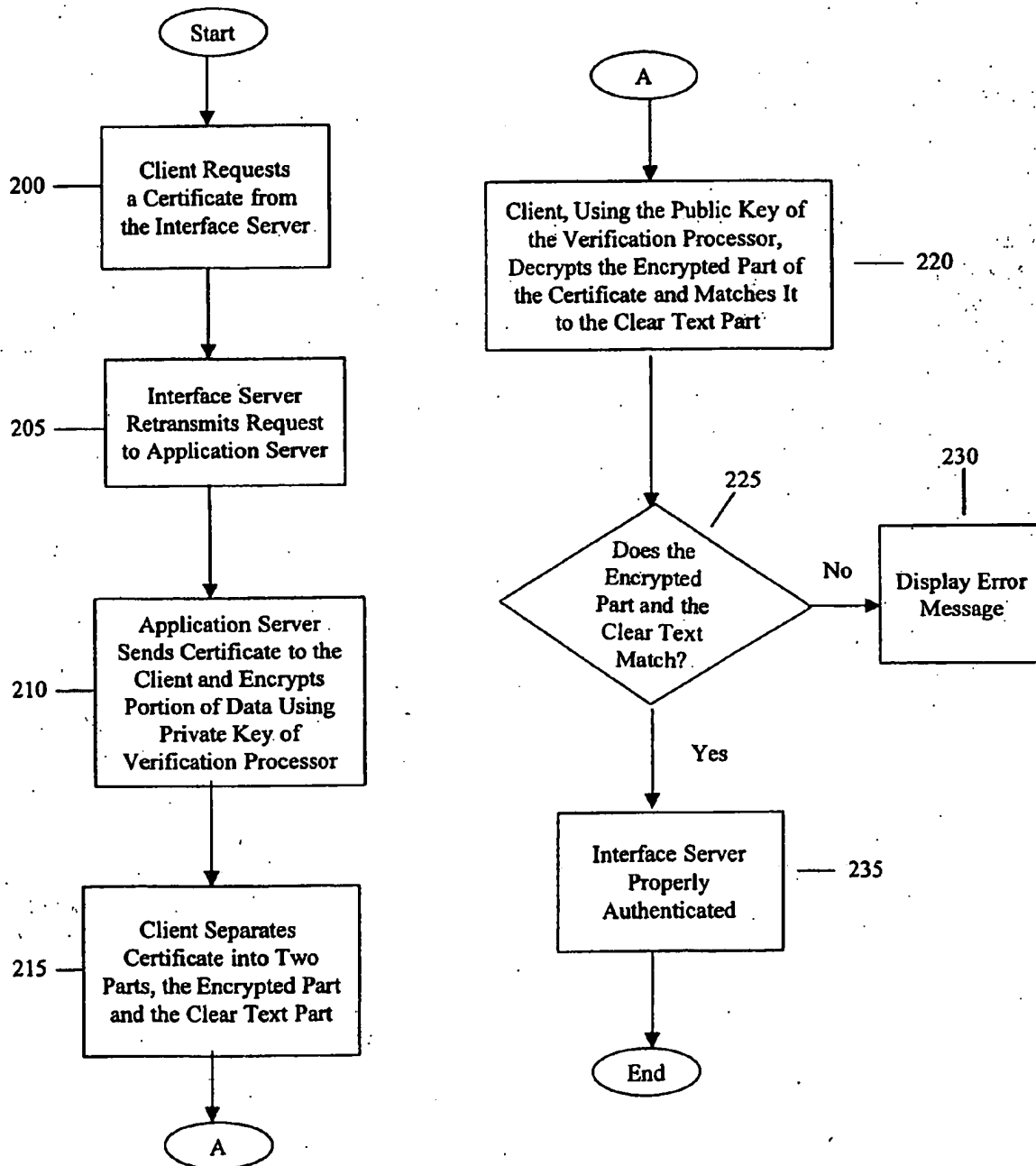




Fig. 3

Transmission and Storage of Data

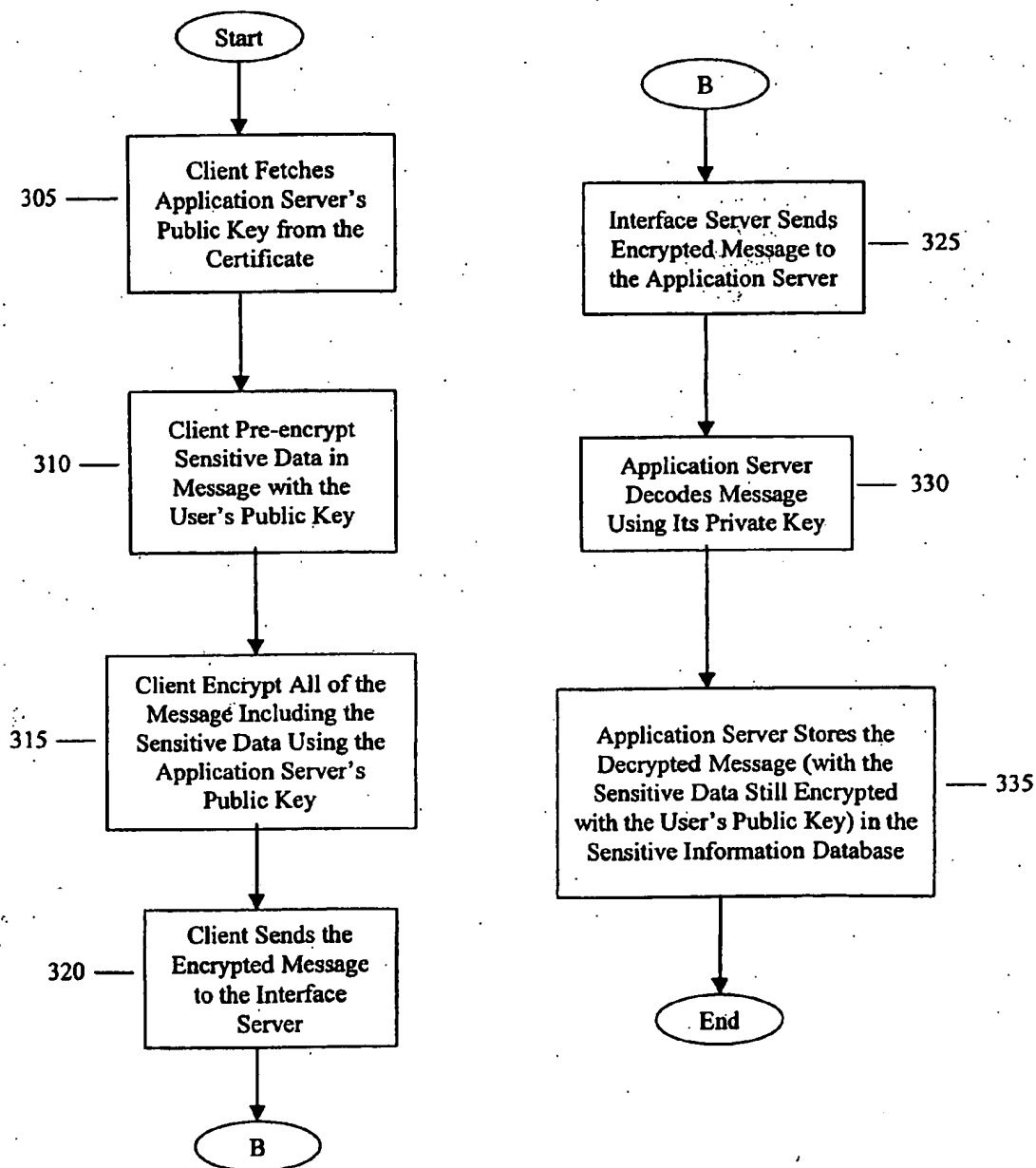




FIG. 4

Search Operation

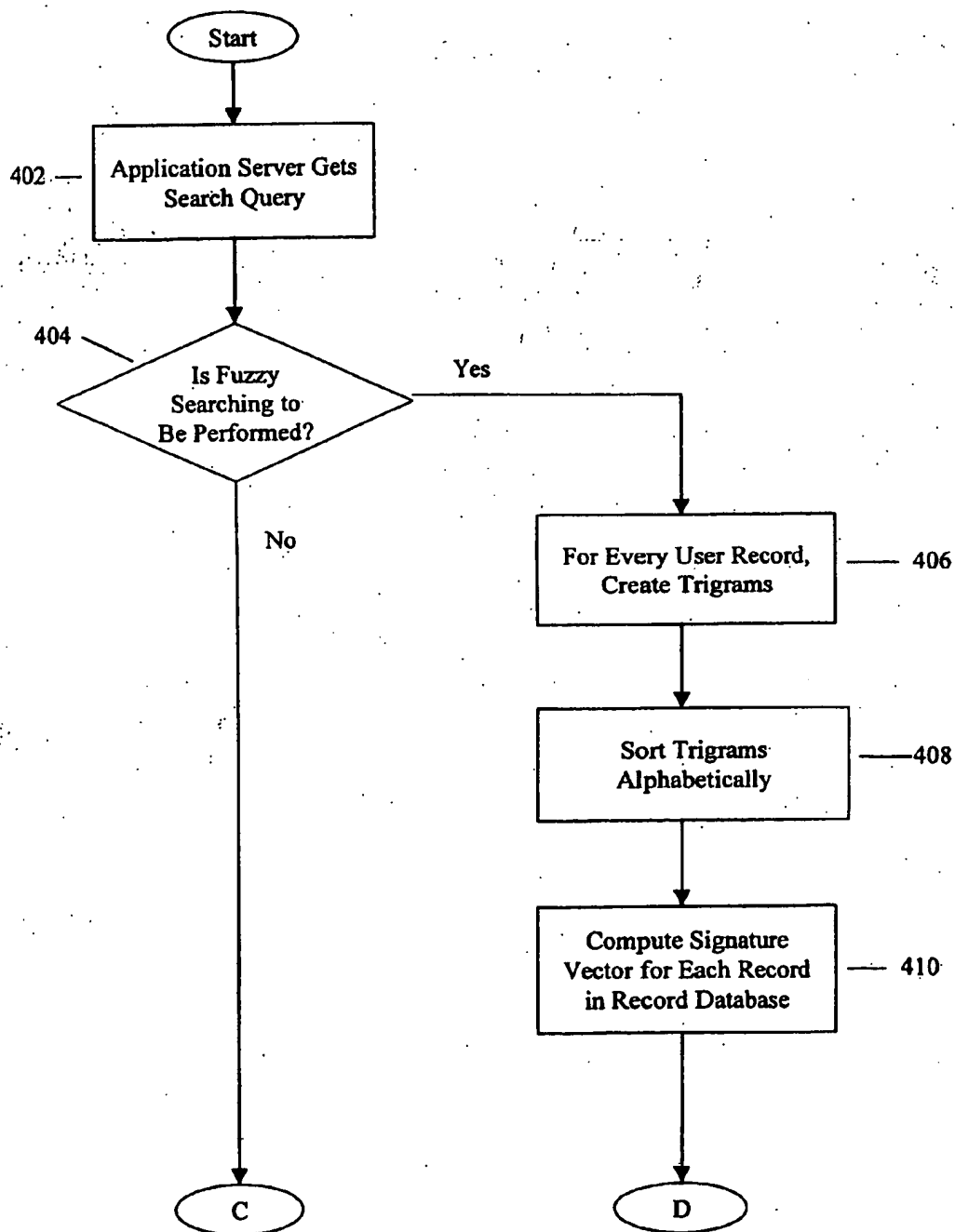




FIG. 4 (continued)

Search Operation

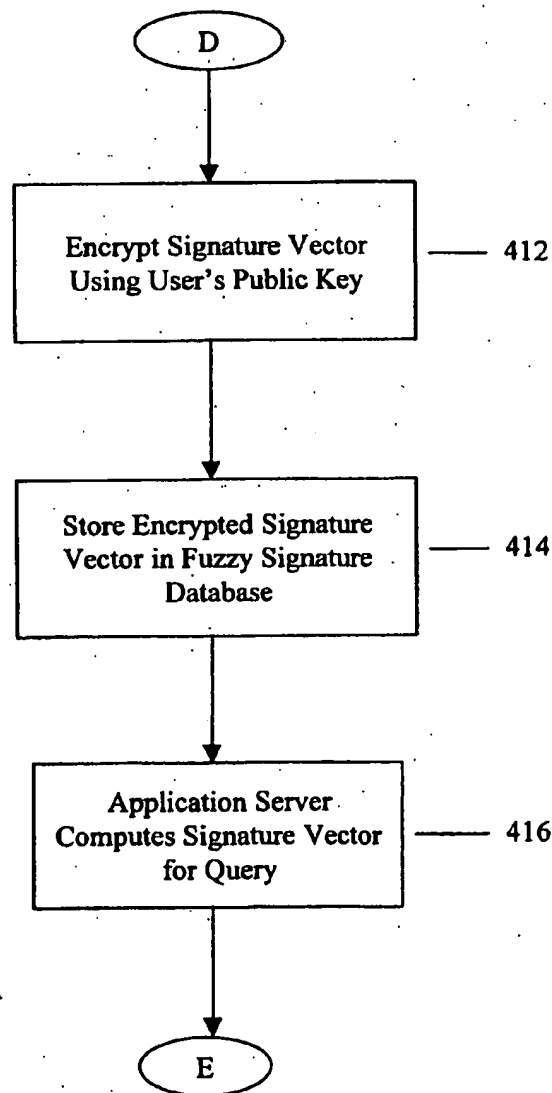




FIG. 4 (continued)

Search Operation

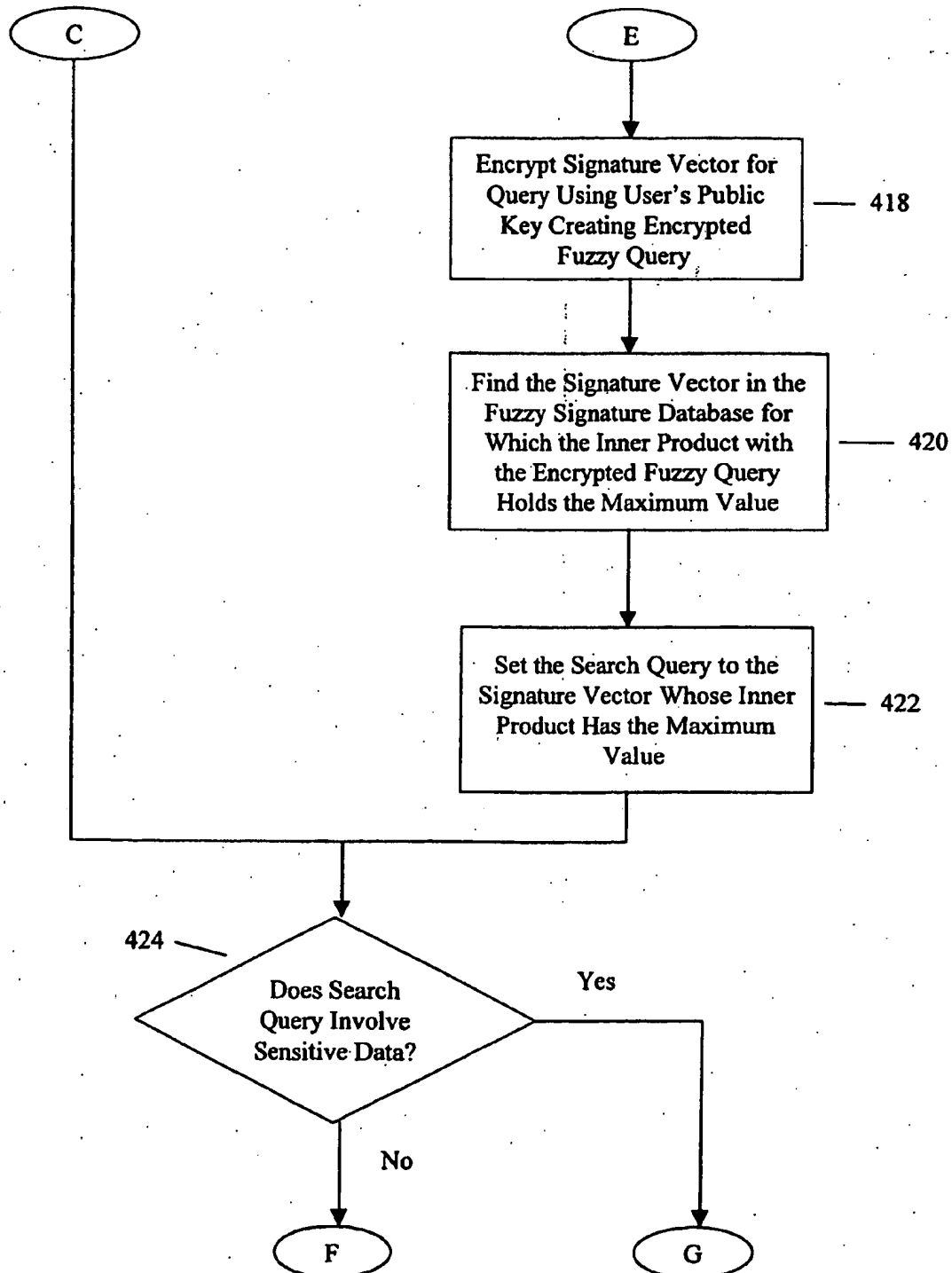




FIG. 4 (continued)

Search Operation

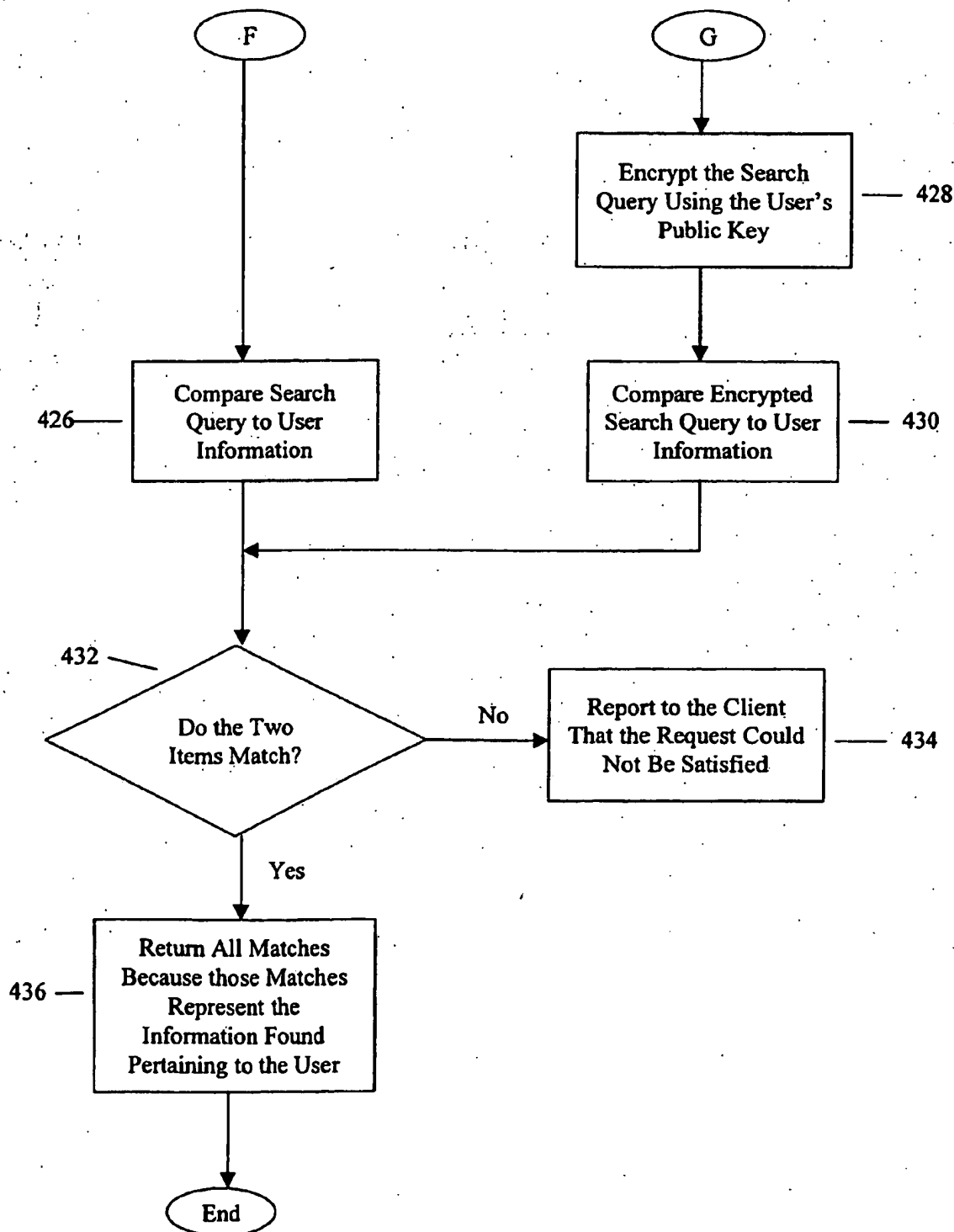




FIG. 5

Accessing Sensitive Data

